

CLAIMS

I claim:

1. A device (1) for adjusting the height of an arrangement (2) relative to a mounting surface (3), said device being connected with a bottom (5) of the arrangement (2) and comprising:

5 at least two mobile elements (7a, 7b) that are telescopically displaceable relative to one another;

a socket (9) on said bottom (5), said socket (9); and,

a rotary wheel (8), said rotary wheel (8) including a first thread (8a) and a second thread (8b) having complementary inclinations and surrounding said socket (9) on all sides

10 wherein said rotary wheel (8) also surrounds a foot (11), and wherein said socket (9) cooperates with said first thread (8a) and said foot (11) cooperates with said second thread (8b).

2. The height-adjusting device as defined in claim 1, wherein the first thread (8a) is a right-handed thread.

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3. The height-adjusting device as defined in claim 1, wherein the second thread (8b) is a left-handed thread.

20 4. The height-adjusting device as defined in claim 2, wherein the second thread (8b) has twice as large an inclination as the first thread (8a).

5. The height-adjusting device as defined in claim 3, wherein the second thread (8b) has twice as large an inclination as the first thread (8a).

25 6. The height-adjusting device as defined in claim 1, wherein the socket (9) is pot-shaped, the pot comprising a cover (9a) with a cylindrical wall (9b), said cover (9a) including a pin-shaped holding element (9c) disposed centrally thereon and wherein said cover (9a) is fastened to the bottom (5) of the arrangement (2).

30 7. The height-adjusting device as defined in claim 6, wherein said pin-shaped holding element (9c) is surrounded by an intermediate sleeve (13) said intermediate sleeve (13) comprising two slits (14) disposed opposite each other.

8. The height-adjusting device as defined in claim 7, wherein a pin (15) engages with each of said slits (14), said pin (15) being firmly connected to the foot (11) so that the foot (11) is secured against rotation relative to the pin-shaped holding element (9c) of socket (9).

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9. The height-adjusting device as defined in claim 7, wherein said pin-shaped holding element (9c) of the socket (9) includes a slit (16) in which is guided a pin (18) that is firmly connected with the intermediate sleeve (13) whereby the intermediate sleeve (13) is secured against rotation relative to the pin-shaped holding element (9c) of the socket (9).

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10. The height-adjusting device as defined in claim 8, wherein said pin-shaped holding element (9c) of the socket (9) includes a slit (16) in which is guided a pin (18) that is firmly connected with the intermediate sleeve (13) whereby the intermediate sleeve (13) is secured against rotation relative to the pin-shaped holding element (9c) of the socket (9).

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11. The height-adjusting device as defined in claim 1, wherein the pin-shaped holding element (9c) includes a displacement stop (20) which with the pin (18) disposed in the intermediate sleeve (13) limits the displacement of the foot (11).

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12. The height-adjusting device as defined in claim 1, wherein the rotary wheel (8) includes a toothed element (22) that cooperates with a transmission element (24).

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13. The height-adjusting device as defined in claim 1, wherein at least three height-adjusting devices (1) are connected with the bottom (5) of the arrangement (2) so that said height-adjusting devices (1) define a plane.

14. The height-adjusting device as defined in claim 13, wherein the three height-adjusting devices (1) form the corner points of an equilateral triangle.

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15. A support (30) for an optical system that is provided with at least three height-adjusting devices (1) connected with the bottom (5) of a height adjustment device support (3), said support (30) comprising:

a base (31) with a left and a right hand rest (31a and 31b), wherein left and right hand rest (31a and 31b) are fastened to the base (31) by means of a hinge (32); wherein said base (31) is connected with the bottom (5) of the, and wherein each said height-adjusting device (1) cooperates with a socket (9) surrounded on all sides by a rotary wheel (8), said rotary wheel
5 also surrounds a foot (11), and including a first thread (8a) and a second thread (8b), said first thread and said second thread having complementary inclinations[,]and wherein the socket (9) cooperates with the first thread (8a) and the foot (11) cooperates with the second thread (8b) so as to prevent rotary movement in said foot (11) during said height adjustment.

10 16. The support (30) for an optical system as defined in claim 15, wherein the first thread (8a) of the height-adjusting device is a right-handed thread.

17. The support (30) for an optical system as defined in claim 15, wherein the second thread (8a) of the height-adjusting device is a left-handed thread.

15 18. The support (30) for an optical system as defined in claim 16 wherein the second thread (8b) has an inclination twice as large as that of the first thread (8a).

19. The support (30) for an optical system as defined in claim 17, wherein the second thread
20 (8b) has an inclination twice as large as that of there first thread (8a).

20. The support (30) for an optical system as defined in claim 15, wherein the base (31) consists of the bottom (5) and a surrounding wall (34) and that the contour of the bottom (5) corresponds to the contour of the bottom (99) of the optical system.

25 21. The support (30) for an optical system as defined in claim 20, wherein the surrounding wall (34) is provided with at least three recesses (36) in each of which the rotary wheel (8) engages partly with a surrounding ribbing (38).

30 22. The support (30) for an optical system as defined in claim 15, wherein the bottom (5) of the base (31) is in the shape of a T formed by a cross-bar (40) and a bar (42) disposed perpendicular to it.

23. The support (30) for an optical system as defined in claim 22, wherein the three height-adjusting devices (1) are disposed at the bottom (5) of the base (31) so that they define an equilateral triangle, with two of said height-adjusting devices (1) being intended for the height
5 adjustment are located in the cross-bar (40) and the third height-adjusting device (1) being intended for the height adjustment of the end (42a) of the bar (42) being disposed opposite the cross-bar (40).

24. The support (30) for an optical system as defined in claim 15, wherein each of at least two
10 rotary wheels (8) is provided with a toothed element (22) that cooperates with a transmission element (24), and said at least two rotary wheels (8) are synchronously displaceable.

25. The support (30) for an optical system as defined in claim 24, wherein all rotary wheels (8)
15 of the height-adjusting device (1) are connected with one another by means of a single transmission element (24).

26. The support (30) for an optical system as defined in claim 15 wherein the optical system is
a microscope (100) containing a stand (50) defining a stand bottom (52) and that the microscope (100) is detachably connected to the stand bottom (52) at the base (31) of the
20 support (30).

27. The support for an optical system as defined in claim 25 wherein the optical system is a
25 microscope (100) containing a stand (50) defining a stand bottom (52) and that the microscope (100) is detachably connected to the stand bottom (52) at the base (31) of the support (30).

28. The support (30) for an optical system as defined in claim 25, wherein the base (31)
30 contains a recess (44) for ventilation and that in the base (31) there is provided at least one opening (45) for fastening the microscope (100).